

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HAW MOLECULAR WEIGHT POLYETHYLENE OXID

In Pr: David S. JONES Appropriation No.: 09/877,387 Docket No.: 252312007500

Figure 1



Me. O(O) O(O) O(O) O(O) O(O) O(O) O(O) O(O	OH NH <sub>2</sub> OH NH <sub>2</sub> OH NH <sub>2</sub> OH NH <sub>2</sub> OH NH <sub>2</sub>
Me of oh	ZT Z
Me. o( O) NH NOR RONH <sub>2</sub> 10  10  11  NH NOR  NOR  NH NOR  NOR	о МН Н

		Sheet 3 of 20
(BTC)O(~ <sup>O</sup> ) <sub>n</sub> O(BTC)	HN H	NHCbz
<u>12</u>	13	NHCbz
CbzHN O N O CbzHN O N O O O O O O O O O O O O O O O O O		NHCbz
		•
H <sub>2</sub> N		√NH <sub>2</sub> √NH <sub>2</sub>
		NH CI O CI
$\begin{array}{c} RS & H \\ O \\ RS & H \\ O \\ RS & H \\ O \\ \end{array}$		H N O SR O SR

Figure 3

PNPO TO OTOPNP + BochN 
$$\left( \bigcirc \right)_{n}NH_{2}$$

BochN  $\left( \bigcirc \right)_{n}NH_{2}$ 

BochN  $\left( \bigcirc \right)_{n}NH_{2}$ 

BochN  $\left( \bigcirc \right)_{n}NH_{2}$ 

BochN  $\left( \bigcirc \right)_{n}NH_{2}$ 

BochN  $\left( \bigcirc \right)_{n}NH_{2}$ 
 $\left( \bigcirc \right)_{n}NH_{2}$ 

Figure 4

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-IG.	SUBCLASS	
O.G. FIG.	CLASS	
APPROVED	B√	DHAFTSMAN

$$(TG)_{10} \cdot (CA)_{10} \cdot O - \overset{\bigcirc}{P} - O(CH_2)_6 S \overset{\bigcirc}{N} \overset{\longrightarrow}{N} \overset$$

$$(TG)_{10} \cdot (CA)_{10} \cdot O - \overset{Q}{P} - O(CH_2)_6 S \overset{Q}{\longrightarrow} \overset{$$

Figure 5

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·	OH OH HO HO OH OH HO OH OH HO OH HO HO OH HO OH HO HO OH HO OH HO OH HO OH HO OH HO OH HO HO OH HO HO OH HO HO HO HO HO HO HO HO HO HO HO HO H	но он ООН
	HO TO OH OH OH OH OH OH OH OH	но он ООН ООН

Figure 6

D1-NH -N-Q	0 N= NH-D
HN N N N N N N N N N N N N N N N N N N	N N NH
D1-NH ( = N-0	0-N=_NH-D1
Ö 204; average n = approxin	^

$$Me \cdot O \left( \begin{array}{c} O \\ O \\ N \end{array} \right) = \begin{array}{c} O \\ N \\ N \end{array}$$

$$O \\ N \\ N \end{array} = \begin{array}{c} O \\ N \end{array} = \begin{array}{c} O \\ N \\ N \end{array} =$$

200; average n = approximately 503 (PEG 20K) 201; average n = approximately 114 (PEG 5K) 205; average n = approximately 261 (PEG 12K) 301; average n = approximately 682 (PEG 30K)

202; average n = approximately 503 (PEG 20K)

D1-NH

$$N = NO$$
 $N = NO$ 
 $N = NO$ 

Figure 7

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	SUBCLASS	
ij	LASS	

$$H_2NO-G_2$$
 $O$ 
 $O$ 
 $G_2-ONH_2$ 
 $H_2NO-G_2$ 
 $G_2-ONH_2$ 
Formula 9

$$H_2NO-G_2$$
 $N-O-R_C-O-N$ 
 $G_2-ONH_2$ 
 $H_2NO-G_2$ 

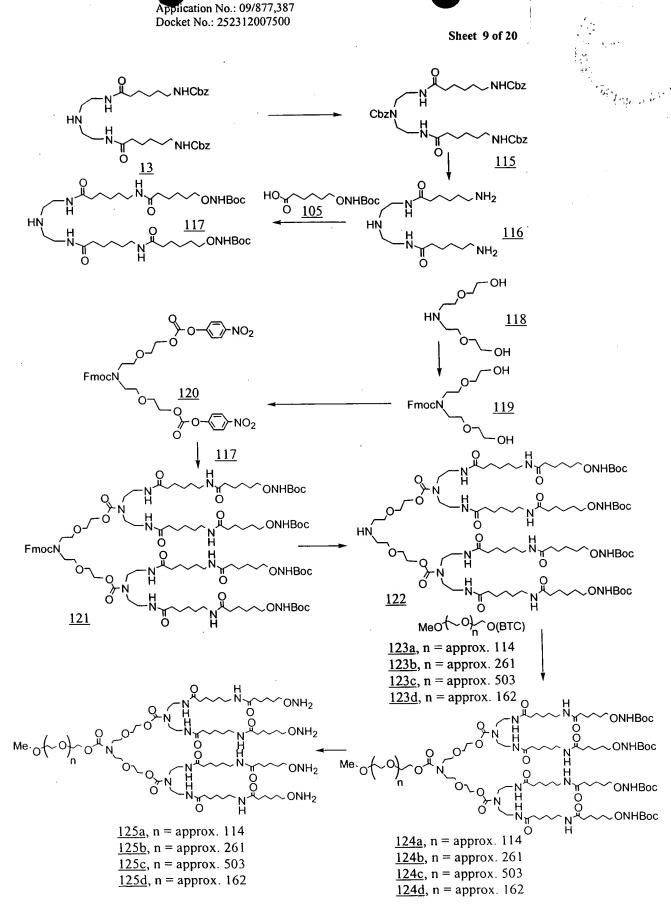
Formula 10

$$H_2NO-G_2$$
 $N-CH_2CH_2O)_nCH_2CH_2-O-N$ 
 $G_2-ONH_2$ 
 $H_2NO-G_2$ 

Formula 11

$$H_2NO-G_2$$
 $N$ 
 $CH_2)_n$ 
 $G_2-ONH_2$ 
 $G_2-ONH_2$ 
Formula 13

Figure 8



Title: MULTIVALENT PLATFORM MOLECULES COMPRISING
MOLECULAR WEIGHT POLYETHYLENE OXID

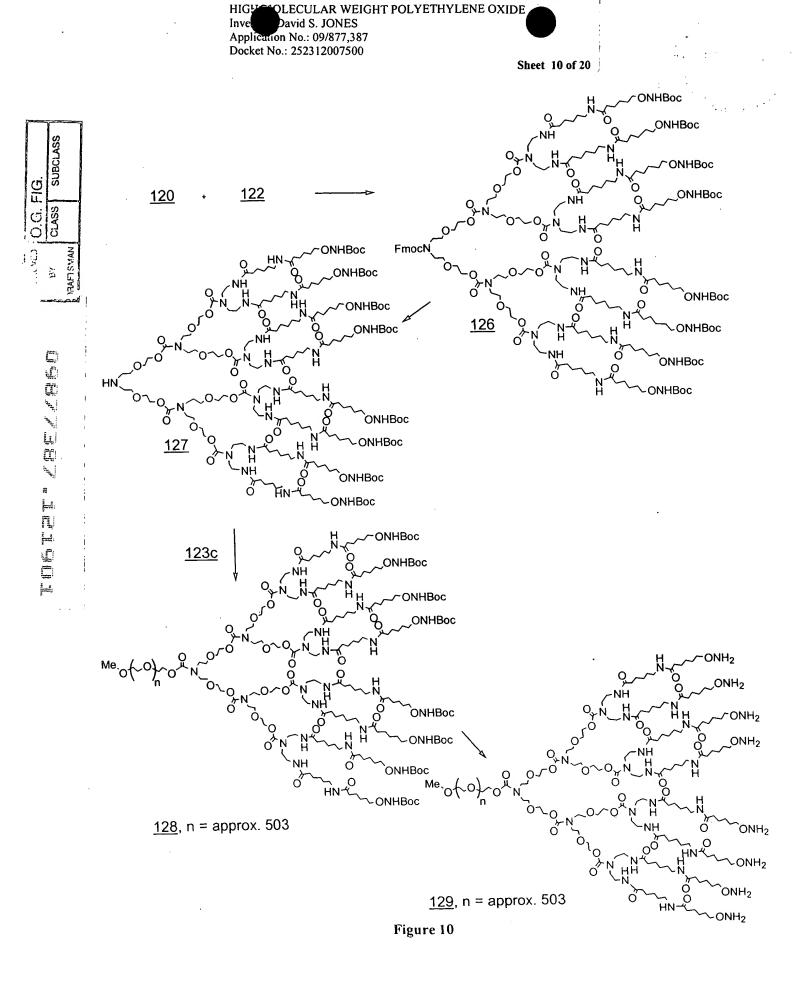
or: David S. JONES

SUBCLASS

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ij.,

Figure 9



Title: MULTIVALENT PLATFORM MOLECULES COMPRISING

HIGU PLECULAR WEIGHT POLYETHYLENE OXIDE pavid S. JONES

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	LASS	
O.G. FIG.	SUBCLASS	
	CLASS	- N
APPROVED	à	DRAFTSMAN

Figure 11

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નુ ગુણ	SUBCLASS	
0.G. FIG	CLASS	
APPROVED	À	DJA! SMAN

PNPO O OPNP + Bochn 
$$\left(O\right)_{n}NH_{2}$$
 + Bochn  $\left(O\right)_{n}NH_{2}$  + Boc

$$H_2NO$$
 $H_2NO$ 
 $H_2N$ 

136, n = approx. 112

Figure 12

lie.

Figure 13

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VED 10.C. FIG.	SUBCLASS	
O.C.	CLASS	
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Figure 14

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	iG.	SUBCLASS	
	O.G. FIG.	CLASS	
A CONTRACTOR OF THE PARTY OF TH	CEVORGO	BY	CHAFTSMAN

Figure 15

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIG/ TOLECULAR WEIGHT POLYETHYLENE OXIDE Inventor David S. JONES Application No.: 09/877,387 Docket No.: 252312007500

SUECLASS

APPROVED O.G. FIG. BY CLASS SUE

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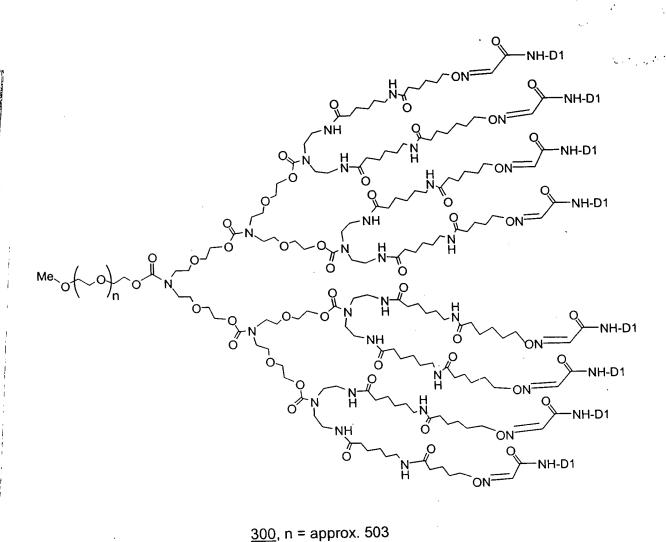


Figure 16

MeO (~0) O(BTC) 123c	$ \begin{array}{c} 117 \\ \hline  \\  \\  \\  \\  \\  \\  \\  \\  \\  \\  \\  \\  \\ $
	$\begin{array}{c} O \\ O \\ NH \end{array}$ $\begin{array}{c} O \\ NH \end{array}$

$$\begin{array}{c} 106 \\ \text{H}_2\text{N} \sim \text{O} \sim \text{NH}_2 \end{array} \qquad \begin{array}{c} 106 \\ \text{NH}_2\text{N} \sim \text{O} \sim \text{N}_1 \sim \text{ONHBoc} \\ \text{(BTC)O} \leftarrow \text{O} \sim \text{O} \sim \text{N}_1 \sim \text{O} \sim \text{O} \sim \text{N}_1 \sim \text{ONHBoc} \\ \text{BocHNO} \sim \text{N}_1 \sim \text{O} \sim \text{N}_1 \sim \text{O} \sim \text{N}_1 \sim \text{ONHBoc} \\ \text{305} \\ \text{H}_2\text{NO} \sim \text{N}_1 \sim \text{O} \sim \text{N}_1 \sim \text{O} \sim \text{N}_1 \sim \text{ONH}_2 \\ \text{306} \end{array}$$

Figure 17

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Buch	-	_
FIG.	SUBCLASS	
0.G. FIG.	CLASS	
APPROVED	ВУ	DH AFTSMAN
		-

Figure 18

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O.G. FIG.	CLASS SUBCLASS		
APPROVED (	) M	HI TSMAN	i

gga Gly 1	cgg Arg	acc Thr	tgt Cys	ccc Pro 5	aag Lys	cca Pro	gat Asp	gat Asp	tta Leu 10	cca Pro	ttt Phe	tcc Ser	aca Thr	gtg Val 15	gtc Val	\$ <b>48</b>
ccg Pro	tta Leu	aaa Lys	aca Thr 20	ttc Phe	tat Tyr	gag Glu	cca Pro	gga Gly 25	gaa Glu	gag Glu	att Ile	acg Thr	tat Tyr 30	ser	tgc Cys	96
aag Lys	ccg Pro	ggc Gly 35	tat Tyr	gtg Val	tcc Ser	cga Arg	gga Gly 40	ggg ggg	atg Met	aga Arg	aag Lys	ttt Phe 45	тте	tgc Cys	cct Pro	144
ctc Leu	aca Thr 50	Gly	ctg Leu	tgg Trp	ccc Pro	atc Ile 55	Asn	act Thr	ctg Leu	aaa Lys	tgt Cys 60	Thr	ccc	aga Arg	gta Val	192

Figure 19

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0.G. FIG.	SS SUBCLASS	
APPROVED O.G	BY CLASS	DRI FTSMAN

Domain 1 of  $\beta_2 GPI$  (D<sub>1</sub>, where bold letters stand for single letter amino acid code of terminal amino acids of Domain 1 of  $\beta_2 GPI)$ 

Transaminated Domain 1 (TA/D1)
Comprising a terminal glyoxyl group

Figure 20